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ABSTRACT

Based on data from a longitudinal study of preservice teacher education conducted at a large midwestern university, this paper describes and appraises what prospective elementary teachers in two different teacher preparation programs were taught about textbooks, what they learned, and what they did with these lessons during student teaching. It is suggested that, rather than telling novices not to "teach by the book," teacher educators need to consider contextual constraints and the limits of beginners' knowledge and skills and teach beginning elementary teachers how to learn from using published curricular materials. These issues are explored by addressing four questions: (1) What did the teacher education programs convey about textbooks, planning, and curricular decision making? (2) What did the prospective teachers come to believe about the use of textbooks, about planning, and curricular decision making? (3) What did the student teachers do with textbooks and teachers' guides during student teaching? and (4) What should preservice elementary teacher education programs teach beginning teachers about textbooks and their role in planning and teaching? (Author/JD)

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Deborah Loewenberg Ball
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Abstract

Based on data from a longitudinal study of preservice teacher education conducted at a large midwestern university, this paper describes and appraises what intending elementary teachers in two different teacher preparation programs were taught about textbooks, what they learned, and what they did with these lessons during student teaching. The authors argue that, rather than telling novices not to "teach by the book," teacher educators need to consider contextual constraints and the limits of beginners' knowledge and skills and teach beginning elementary teachers how to learn from using published curricular materials.

USING TEXTBOOKS AND TEACHERS' GUIDES: WHAT BEGINNING ELEMENTARY TEACHERS LEARN AND WHAT THEY NEED TO KNOW[1]

Deborah Loewenberg Ball and Sharon Feiman-Nemser[2]

Introduction

> At the end of student teaching they want me to be a *master* teacher . . . like something out of a book, or something out of all these research articles, but is it *realistic*? (Sarah, p. 184)[3]

Teacher educators, critical of prevailing classroom practices, often view preservice teacher preparation as a vehicle for introducing change by preparing teachers to be change agents. Many would agree with Harste (1985) that schools of education must not prepare prospective teachers to fit in with schools as they are. At the same time, teacher education students are novices who cannot be expected to spearhead school reform; their needs and abilities must be viewed from a perspective of learning to teach (Feiman-Nemser, 1983). Translating ambitions for school improvement into immediate goals for beginners can have problematic consequences for teacher effectiveness and teacher learning. Whether to prepare teachers to fit into schools or to change them is therefore a significant dilemma for teacher education.

The importance of this dilemma was brought home to us in a study we have been conducting on learning to teach and the preservice curriculum. Between

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[1]Paper presented at the annual meeting of the American Educational Research Association, San Francisco, April 1986.

[2]Deborah Loewenberg Ball is a research assistant with the Knowledge Use in Learning to Teach Project. Sharon Feiman-Nemser, coordinator of the project, is an associate professor of teacher education at Michigan State University. The authors acknowledge Margret Buchmann, Beth Lawrence, and Karen Noordhoff Hagstrom for their valuable comments on drafts of this paper and for their assistance with data analysis.

[3]Pseudonyms are used for all names of persons, programs, and schools.

1982-1984 we followed six elementary education students through two years of undergraduate teacher education. The six teacher education students were chosen from candidates nominated by program coordinators and matched on the basis of survey data collected on all students at Michigan State University. Each term we interviewed the students about what they were learning and how they thought that would help them in teaching and learning to teach. We also documented courses, field experiences, and each student's experience in student teaching.

Our student informants were enrolled in two contrasting programs which are part of an effort to reform preservice teacher preparation. The Academic Program emphasized the importance of theoretical and subject matter knowledge in teaching and provided limited field experiences prior to student teaching. The Decision-making Program emphasized generic methods of teaching and research-based decision making. Much of the program took place in an elementary school so that teacher candidates spent considerable time in classrooms, aiding, observing, and teaching lessons. We thought that structural and ideological differences between the two programs might help account for differences in the student teachers' thinking and learning.

As we sat in on courses, we were struck by the fact that both programs seemed to promote the idea that good (i.e., "professional") teachers do not use textbooks and teachers' guides but develop their own curriculum instead. We began to wonder what would happen during student teaching if students were placed in classrooms where textbooks were likely to be a major source of instructional activities. As we analyzed what the teacher education students were taught and what they learned about the role of textbooks in teaching, and

as we explore how this played out during student teaching, we realized that the issue of textbooks and learning to teach could be viewed as an instance of the larger dilemma posed above.

In this paper we explore this issue of textbooks and learning to teach by addressing four questions:

1. What did the teacher education programs convey about textbooks, planning, and curricular decision making?

2. What did the prospective teachers come to believe about the use of textbooks, about planning, and curricular decision making?

3. What did the student teachers do with textbooks and teachers' guides during student teaching?

4. What should preservice elementary teacher education programs teach beginning teachers about textbooks and their role in planning and teaching?

What Did the Teacher Education Programs Teach about Curriculum Materials?

> I keep hearing this over and over again--get away from the textbooks, you know, the textbooks are just a tool. They're a teaching tool, the actual teaching comes from up here (taps her forehead), from you. . . . (Janice, I-3)[4]

> They said, um, don't rely so much on the textbook, just go out and do your own things and experiment. . . . (Linda, I-6)

To understand what teacher candidates were taught about textbooks and their role in teaching, we analyzed field notes from six courses.[5] We examined explicit statements about textbooks and planning as well as messages implied in particular assignments. We also looked at opportunities that students had to plan or work with curricular materials (e.g., critiquing

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[4]Indicates interview number.

[5]The appendix provides a summary of the content and structure of these courses.

textbooks, constructing units, teaching reading lessons). Our informal and formal interviews with the student teachers helped us understand how they were thinking about textbooks and teaching.

In this section we describe the program messages and analyze two class assignments in detail. These analyses show how the mandate to depart from textbooks was embodied in the preservice curriculum and what sense students made of it (Doyle, 1985).[6]

Academic Program: "Use Textbooks As Resources, But Don't Follow Them"

Courses in the Academic Program consistently stressed that the responsibility for decisions about what to teach and how to teach it could not be "abdicated" to curricular materials because good teaching requires much more than following teachers' guides.

In the educational psychology course, the students heard that a "solid grasp" of subject matter (understanding the central concepts in a discipline and the relationships among them) is crucial, because figuring out what to teach and how to put it together is a big part of what teachers have to do. Rather than simply follow the schedule and sequence of topics and activities laid out in teachers' guides, teachers decide for themselves what topics to emphasize, touch on, and omit. They also develop their own units, lessons, and materials. One instructor called textbook teaching "a very low-level type of teaching" (p. 207), the mark of a technician, not a professional.

The Academic Program emphasized the deficiencies of textbooks and teachers' guides. In educational psychology, the teacher candidates heard

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[6]Doyle (1985) argues that the tasks teachers assign have important consequences for what students learn, and since the same content can be represented by different learning tasks, any investigation of curriculum requires more than a cursory examination of topics covered

that textbooks are not always good and often do not fit with the teacher's goals, priorities, or theories of learning. A teacher may not like the way a textbook treats a particular topic or may not think that everything in the book is equally important to learn. The instructor said that teachers make these judgments based on their understanding and conception of the subject matter (p. 36). Teachers should only use textbooks to get ideas or activities that fit what they are trying to do.

The message that teachers should not follow textbooks was reinforced in the reading methods courses in which students were told that basals were bad because they place too much emphasis on phonics and word identification skills. The instructor, who also taught the reading methods course in the Decision-making Program, advocated a whole language approach to reading and taught mainly about activities such as choral reading and creative dramatics.

The Academic Program promoted a view of teaching that suggests teachers should focus on student thinking and teaching for understanding. According to this view, teachers should identify and seek to change students' naive conceptions about subject matter. The curriculum course and the science methods course, both taught by the same instructor, advocated conceptual-change teaching. The instructor, a science educator and an intellectual leader in the program, told the teacher candidates that science texts are often based on an "additive" view of learning, meaning that they focus on "filling up" students with knowledge, without attention to how students learn or what their misconceptions might be (pp. 1, 68). He said that because conceptual-change teaching involves attention to so many factors (content, activities, particular students, evaluation), teachers cannot rely on teachers' guides to tell them what to do (pp. 43-44).

Overall, Academic Program students got the message that textbooks had serious deficiencies. If they wanted to be good teachers, they should not rely on teachers' guides, but use them only as resources. Danielle, one of our focal students, said she understood she "should get away from the basal as much as possible, use it as just another tool, another resource" (I-6).

Assignment: Critiquing textbooks. Academic Program students were assigned to critique textbooks in both years of the program, first in the curriculum course and the next year in science methods. The textbook critiques echoed the dominant theme that good teaching (i.e., teaching for conceptual change) requires attention to content, activities, and students; curricular materials cannot contain all the necessary information. A comparison of one student's responses to these tasks illustrates how teacher candidates' thinking and language changed over time.

The curriculum course, the second course in the Academic Program, emphasized that teachers are "curriculum decision makers." The instructor focused on how teachers' theories of learning shape the way they plan, use textbooks, and teach. He wanted students to explore alternative theories of learning and their implications for teaching.

The textbook critique was the second major assignment in this course. The students were supposed to select a textbook in their primary subject area, examine one section of the teacher's guide, and decide whether or not the text was appropriate for elementary pupils. Because there had been no prior discussion of curricular materials, the students felt unsure about how to complete the assignment. The instructor told them to consider two things: (a) the content, in terms of its importance and usefulness to students ("Does the text emphasize less important content at the expense of basic or more important ideas?"); and (b) the text's "comprehensibility" ("Will your

students understand the text? What difficulties might they experience?"). The teacher candidates were also supposed to examine the information provided for the teacher, looking to see if the teacher's guide contained the information about content and students that they "would need to do a good job of teaching."

In order to understand what sense students made of this assignment, we examined the task from the perspective of one of our focal students. Danielle examined a second-grade science textbook and decided that the "activity-centered instructional approach" was appropriate since "children at this level require concrete operations in problem manipulation" to learn science skills. She especially liked the amount of information provided for the teacher (e.g., lists of required materials, instructions for setting up the equipment, details on advance preparation, suggested dialogue for the teacher to stimulate student interest and initiate the activity). Danielle concluded that this science textbook was "a very valuable tool," and that the individual teacher's own "personality and experience" would guide him or her in using the text effectively to "in order for meaningful learning to occur."

Danielle, usually a top student, was shocked when she received a *C* on the textbook critique. In the margins of her paper, the instructor challenged her claims about "children at this level." He directed her to reconsider the information provided for teachers ("Is there any discussion of possible incorrect student responses?") and think about what she would need to know to adapt the textbook effectively.

In order to improve her grade, Danielle revised her textbook critique and turned it in two weeks later. During this time, the instructor had introduced conceptual-change learning theory in class. Danielle used these ideas to reformulate her evaluation of the text. In particular, she changed what she had

said about the teacher's guide, suggesting that it should include a section on student misconceptions. She told the researcher that, although she redid the paper, she still didn't know whether she was "on the right track or not." But Danielle's revision earned her an *A* and the comment, "You're right on target!"

This assignment taught Danielle that she had been looking at textbooks in the "wrong" way and that they may not be as good as they appear. At the end of the term, she reflected about the textbook critique assignment:

> The first time I turned it in, I thought it was right, but it wasn't. And then I did it over again and I learned something I didn't even want to learn, because I was so firm in my belief that the textbook was good that I didn't even *want* to know any different. . . . (I-2)

In science methods, a year later, the Academic Program students had a second textbook critique assignment which pulled together what they had been studying in the first half of the course. Their responses revealed some important changes in their perception of the task, their language, and their thinking about curricular materials. These changes suggest that at least some of the students were beginning to look at textbooks in a pedagogically oriented way (Feiman-Nemser & Buchmann, in press).

The instructor told the students that the assignment was difficult but important. This time, they were supposed to select a science text for a grade level they were interested in teaching and examine three sections in both the text and the teacher's guide, answering the following questions and supporting their answers from the texts:

> 1. What are the goals of this textbook in terms of science learning (e.g., scientific skills, correct explanations and facts, the structure of science, etc.) based on an article they had read?
>
> 2. What style of teaching (activity driven, conceptual change, didactic, discovery) is advocated?
>
> 3. How well are the activities of the text designed to promote assimilative and accommodative learning?

> 4. How much of the information do you need as a teacher about content, students, teaching methods, and materials is supplied in the teacher's guide?

The assignment also asked students to pretend they were teaching in a district in which their choice was the adopted text and to describe how they would use it, taking advantage of its strengths and compensating for its weaknesses.

Danielle selected the same textbook for this assignment, commenting,

> I wondered if that would be hard for me to look at the same book again, but it really just wasn't the same assignment. I was looking at it from a whole different way this time (p. 148).

Danielle no longer approved of the textbook and, in her paper, criticized the teacher's guide for not providing enough direction:

> The problem . . . is that the teacher's edition does not provide the teacher with any information concerning when the concept should be introduced if the students do not arrive at it on their own, or what questions or clues will elicit the proper response (or, for that matter, what the proper response is!) Student responses are accepted regardless of their accuracy and these responses are never clarified by the teacher or the materials.

Danielle was skeptical about whether the text would foster student learning *"at all"* because it was set up to "promote assimilative learning rather than conceptual change." Her most scathing criticism clearly reveals how her thinking had changed:

> The set-up of the text makes it very easy to teach, as long as the teacher is not concerned with student learning. If she desires a simple, easy-to-follow guide that explicitly describes each activity in detail and keeps the students busy and under control, then this series is fine. However, if she wants her students to learn anything, some modifications need to occur, or a new textbook chosen.

Danielle earned an *A* on her paper. The instructor was "very pleased" with all the textbook critiques because they showed that students knew "what to look for" and "had the knowledge needed in order to do it."

Comparing Danielle's papers reveals some important ways in which her thinking had changed. As a beginning teacher education student, Danielle appreciated the detailed lists and notes in the teacher's guide. By the

second year she could see that the teacher's guide lacked crucial information and would be good only if the teacher was most concerned with materials. She had also picked up the language and perspective of conceptual change and noted the absence of information about scientific concepts, unifying theories, or student preconceptions, remarking that these were "much more important than materials or methods."

In sum, students in the Academic Program learned to critique textbooks from a conceptual-change theory perspective and developed some general concepts about what good teaching entails (e.g., attention to students' preconceptions). They did not, however, acquire the knowledge and skill to adapt textbooks appropriately. Furthermore, they also developed the strong impression that they should avoid relying on published materials.

Decision-Making Program: "You Are a Professional Teacher Deciding for Yourself"

The Decision-Making Program projected an image of the good teacher as a "professional" who makes systematic data-based decisions and determines for herself why she is doing what she does. "Text-bound teachers," who rely on teachers' guides for what to teach and how to teach it, were portrayed as "mere technicians." The emphasis on professional decision making was reflected in a major emphasis on "generic" planning skills introduced in the educational psychology course. The instructor told the prospective teachers that he would show them the steps for making instructional decisions. He taught them a formula for writing behavioral objectives and presented structured formats for daily and unit lesson plans.

In this program, students were explicitly told to avoid following basal readers. In their first reading methods course, the instructor said they

should not follow basals, but could use them as a resource or "instructional tool." The second reading methods course taught that basal readers, although undesirable, are often inescapable. Although new teachers are likely to be required to use a basal series, they should not "get into a lock-step in that basal" (p. 51). The instructor said that basal readers do not provide a total language arts program because they lack variety, and she introduced other activities and strategies that should be used "hand in hand" with the basal (e.g., language experience approach, individualized reading). She did not, however, address how these activities might be integrated with any basal work.

The instructor criticized basal textbooks and their associated practices (e.g., use of workbooks and dittos, round-robin oral reading). Since the Decision-making Program students were working in classrooms while taking the reading methods course, they saw their cooperating teachers using basal textbooks and assigning many worksheets. The student teachers used them as well when working with their reading groups. This incongruity provoked some interesting class discussion about the widespread use of dittos and basals in the school where the teacher candidates were working. One instructor commented that teachers who use a lot of dittos are "too lazy" to plan something better themselves, but did not discuss the policy context within which these teachers were working.

The other methods courses did not deal with textbooks. In mathematics methods, students were shown how to teach unusual topics such as probability and were given activities for teaching more conventional concepts such as place value. They had no opportunity to examine or work with standard math curricular materials. The same was true in the social studies methods course. Students developed the impression that following textbooks and teachers' guides was not "professional" teaching in reading or in any other subject.

Assignment: Planning lessons and units. Decision-Making Program students were taught generic skills and formats for planning in the educational psychology course which they were required to use throughout the program. The planning tasks reflected the dominant theme that good teachers make their own decisions and do not follow teacher's guides. Our focal students' reactions illustrate how they came to think about planning and textbooks as a result of these tasks.

The instructor, an educational psychologist, promised that in this first term of their program he would teach the students many of the skills they would need to be good teachers who plan systematically. First he showed the students a formula for writing objectives: identify terminal behaviors, conditions, criteria, lower limits (p. 3). To write a test or behavior for a given goal, he told them it is only necessary to be able to state things behaviorally. He asserted that "a behavior can be described for any subject even if the one writing them doesn't know the subject" (p. 18). Objectives can be written for any kind of knowledge (e.g., skills, facts, principles, concepts) and should be justified based on their importance to the learner's future social, vocational, academic, physical, or recreational needs ("Does someone need this in the real world?") and on what students at particular levels can learn (based on Piaget).

Next, the instructor presented detailed formats ("like following a recipe," he boasted) for writing unit and daily lesson plans (pp. 4, 7). This model of planning, he said, would help them think through what they were doing; he told students, "you almost can't screw [it] up" (pp. 2-3). Both the unit and daily lesson plans were reproduced on forms that the teacher candidates were to use throughout their program whenever they wrote lesson plans, including student teaching. The daily lesson format spelled out each element

in detail. For example, in the *introduction* to a lesson, students were told to "list main ideas, expected outcomes, relationship to what pupils already know and can do, motivation aids, and agenda in the order you will say them to students" (p. 25).

Our focal students found the formats very useful in planning minilessons for their field placement classrooms. Cathy said that learning how to write lesson plans was "really helpful." At first, she had no idea how to put her ideas down on paper to organize them. Once she had learned to write a lesson plan, "then bingo, my minilessons came just so well because I had something *definite* to look at" (I-1).

Sarah, another focal student, commented that she had never realized how many decisions a teacher had to make in planning and she recited the litany, using her new vocabulary: setting objectives; determining skills, and sub-skills; formulating prerequisites, advanced organizers, conditions, criteria, and terminal behaviors. She felt that the formats would help her "get together what I'm thinking of, what I'm doing, and write it out" so that she would be organized for each day (I-1).

Like many other students in the program, Sarah also developed the idea that her plans had to be original: not "someone else's idea" and not from the textbook. If she tried to use someone else's unit or lesson plan, she explained, she would get "lost" because it wasn't her own idea (I-3). While textbooks were resources, she concluded that good teachers do not "just grab a book and open it up and . . . do whatever the book says to do" (I-3).

The instructor also gave the students an assignment to evaluate and revise a lesson from a teacher's guide using "the ideas we've been talking about in here." Students could select any text they wished and evaluate it using a decision flow chart form the instructor had prepared. They were

supposed to look for each component of a good lesson plan (i.e., goal, objective, justification, pretest, motivation, mental set, demonstration, practice, and posttest) and add the elements that were missing. The instructor told them not to be surprised if they found many of these components missing in teachers' guides.

Betty, one of our focal students, found this assignment especially valuable because, she said, she had never realized the deficiencies of most teachers' manuals:

> I was really surprised with all the fantastic materials they turn out, the publishing companies, when you really look at a unit, how many things are really left out, how much a teacher actually has to supply that's not there. It's not written, *it all has to come from you*. (I-1, emphasis added)

The educational psychology instructor reduced the ambiguity and complexity of planning by providing the teacher candidates with a formula. Although this may be a defensible place to start, it also can mislead students into thinking they have done a good job of planning if they put the things in the right order or include all the parts. Focusing on filling in the form, teacher candidates may not engage in the kind of thinking that accompanies a good plan--they may not think about worthwhile ends and the means to help their students attain them.[7]

The lesson plan assignments also implied that planning is a generic process that starts from scratch, based on principles from educational psychology and unrelated to subject matter considerations. The instructor seemed to assume that decisions about what to teach were straightforward and that the teacher candidates knew their subjects well enough to be able to decide what to teach and how to go about it.

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[7]Dewey (1904/1965) highlights this crucial distinction between outward form and inner patterns of thinking in learning to teach.

Decision-Making Program students learned to fill out the planning forms and use technical vocabulary (e.g., "advance organizer," "terminal behavior"). They also formed an impression of the kind of planning that "professional teachers" do. Sarah explained:

> Planning is sitting down with a stack of notebook paper (laughs) and I know she [the program coordinator] wants you to look at the big picture first, "What do I want them to know at the end?" Okay, and then you go through and write out all these great lesson plans, the objectives and everything, and everything clearly written, all the daily lesson plans written for everything to teach. . . .[The ideas] are supposed to come from your head, from other teachers, from books, so you have to research, a lot of it is books and everything, but a lot is from your own head. . . .(p. 227)

Both Programs: "Good Teachers Don't Follow Textbooks"

Table 1 provides a summary, by course, of the recurring themes within each program. Despite their structural and ideological differences, both programs explicitly communicated that textbooks should be used only as a resource, that following a textbook was undesirable way to teach. Neither program showed students alternative ways to use teachers' guides and textbooks thoughtfully (e.g., how to choose from among the many pieces of a curricular program and modify teaching suggestions and activities appropriately to meet the needs of particular children). The students we followed developed the impression that their own ideas and knowledge were a better source of content than anything in the textbook or teacher's guide; however, in preparation for their role as curriculum developers, they were not helped to think about what constitutes a worthwhile learning activity.

Table 1

Summary of Program Messages About Textbooks and Planning Across Three Courses

Academic Program
1. Educational Psychology: Professional teachers are curriculum developers who think for themselves about what to teach and how to teach it. This responsibility cannot be "abdicated" to a textbook.
2. Curriculum: Teachers must know their subjects well and must understand learning in order to make curricular decisions; textbooks are but one of several sources of information for teachers. Critical examination of textbooks often reveals that they are inadequate to help students learn.
3. Science Methods: Good teachers teach for conceptual change in their students. Science textbooks can provide the teacher with helpful information about the activities and the content, but not about student thinking or misconceptions.
Decision-Making Program
1. Educational Psychology: Making decisions and planning are central tasks of teaching. Good teachers proceed systematically, using scientifically verified principles from psychology as well as their own experience.
2. Reading Methods: Basal readers are one of a range of instructional tools for teachers, but professional teachers make decisions themselves about what they are teaching and how they are teaching it; they don't "simply follow a teacher's guide."
3. Reading Methods (second term): Teachers are usually required to use basal readers. However, basals are not adequate as a total reading-language arts program for children because the programs lack variety. Textbooks must be enriched and extended. Good teachers do not inundate students with dittos and workbook pages; they spend time developing their own activities for children.

Why Would Teacher Educators Try To Get Teachers Away From Textbooks?

We were struck by the consistency of the messages, both across courses and between the two teacher education programs. In analyzing what the student teachers were taught, it seemed to us that the impetus for preparing teachers to avoid textbooks was based on two factors: (a) knowledge about the deficiencies of textbooks and teacher's guides; and (b) an ambition to improve the image of teaching as a profession.

Whereas textbooks dominate much elementary instruction, especially in reading and mathematics, researchers report that text materials have various deficiencies. For example, reading selections in basals often lack substance and variety of literary form (Schmidt, Caul, Byers, & Buchmann 1984). Workbooks and other practice materials are badly designed and confuse rather than help students (Sykes, 1985). The accompanying teachers' manuals contain suggestions that are unclear (Durkin, 1981), and a single lesson may include a large number of unconnected activities and skills (Duffy, Roehler, & Putnam, 1986). Content-area textbooks tend to be written obscurely because authors are under pressure to simplify complex explanations in order to meet readability guidelines (Kantor, Anderson, & Armbruster, 1983). Science teachers' guides fail to provide teachers with necessary information about common student preconceptions that may interfere with learning instructional strategies likely to promote appropriate student learning (Smith & Anderson, 1984). This literature helps explain why teacher educators might encourage prospective teachers to avoid "teaching by the book." Furthermore, several of the teacher education program faculty were themselves involved in research which highlighted problems with textbooks and textbook teaching.

The rhetoric of teacher education that portrays teachers as "professional decision makers" further supports this thrust. Some argue that teaching is

too complex for teachers to be prepared as "technicians" who simply implement plans from teachers' manuals (Lanier, 1984). Political motivations to improve the public image of teaching by making it more clearly a "profession" contribute to this argument as well. Professionals in any occupation do not rely wholly on scripts--they are experts who bring their knowledge and skill to bear on particular cases; this competence entitles them to status and respect.

What Did Prospective Teachers Do During Student Teaching?

The issue of textbooks and planning became particularly important during student teaching as the prospective teachers from both programs grappled with the mandate to avoid textbooks and teachers' guides (Ball & Noordhoff, 1985).[8] Danielle commented, "Even though I was trained to be leery of textbooks, I still found myself falling into that rut for a certain amount of time because I had no other alternative. . ." (I-7).

Confronting Textbooks in Student Teaching

In spite of what they had been taught in their courses, the student teachers in both programs ended up using basals and teachers' guides. Five out of our six focal students were placed in settings with cooperating teachers who used textbooks as the core of their reading and mathematics teaching. Some student teachers felt pressed to maintain the established classroom practice. Others, as they assumed responsibility for the entire day, were simply overwhelmed and resorted to textbooks as a reasonable way to manage, or at least survive, the demands of full-time student teaching.

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[8]Ball & Noordhoff (1985) provide case studies of what two of our focal student teachers (Danielle and Sarah) did with curricular materials during student teaching and what they learned from their experiences.

A surprising finding was that following the text presented unexpected problems for the student teachers. Some discovered that they were unprepared to use textbooks and teachers' guides to teach subject matter. Others followed the teachers' guides rather mechanically, moving through activities without really understanding what they were doing. Because they did not know how to adapt what was in the teachers' manuals, their modifications sometimes distorted the point of the lessons. The following vignettes illustrate some of these reactions to textbooks and teachers' guides.

Going through motions. Janice found planning and teaching all subjects all day long for her second-grade class an overwhelming task. She relied heavily on textbooks and teachers' guides as a way of managing, although she said she felt guilty about doing so. Janice often followed the suggested dialogues in the reading and math manuals almost as scripts. She tried to "do *everything*" (plan, teach groups, keep track of everything, control the children, etc.), but confessed that she did not think through or understand the lessons thoroughly. Especially in math, Janice did not always understand the point of the lesson she was teaching directly from the teacher's guide. When she said things or asked questions that were not in the guide, Janice sometimes got confused. Although she managed to keep things moving along, Janice reflected in her journal, "Sometimes I just feel like I am going through some motions and I don't know what it is all about."

What do the teachers' guides mean? Although the kindergarten math teacher's manual contained detailed scripts, Linda, another student teacher, found it confusing and insufficient:

> The math lessons--they're so *short*. It says like "Objective--to get the kids to know about representing length"--okay what's that

> supposed to mean? And it says, "You will need these materials"--okay, I've got the materials, now what am I supposed to *do* with them? "Procedure -- You will, umm, distribute the chains and they will measure their necks and see whose is longer or shorter" or something, you know. "Other suggested activities," you know, it doesn't tell you hardly *anything*. I'm not sure what they *mean* by all this stuff. . . ." (I-6)

Linda's problems in understanding the teaching suggestions in the guide stemmed from lacks in knowledge about the subject, about pedagogy, and about children--not surprising for a beginner. A more experienced teacher who understood measurement as a mathematical topic, who knew something about how kindergarteners make sense of it, and who could visualize ways of orchestrating such activities would probably not find these teaching suggestions mysterious or underdeveloped.

Modifying textbook lessons. Trying to modify what was in the teachers' guides turned out to be more complicated than expected. Danielle commented to the researcher that, in writing lesson plans for course assignments, she would routinely add a line, "Adapt for the needs of individual students." That was a sure way to get extra points! In student teaching, though, she realized how difficult it really was to "adapt lessons": "In our program--we were never told how to use the basal. We were told a basal isn't all that great and here's a lot of other things you could do" (p. 138).

Janice occasionally modified her math lessons during the course of a lesson. When an idea occurred to her that seemed related to the topic at hand, she would go off on a tangent. Janice was proud of herself for doing this because she thought it made the lesson more interesting and allowed her to put more of herself into her textbook teaching. However, her lack of knowledge of mathematics sometimes produced misleading or incorrect digressions. One day, for example, she could not recall how to write a number sentence for

"one-fourth of 100 equals 25" and finally settled on: 1/4 ÷ 100 = 25 (instead of 1/4 x 100 = 25 or 100 ÷ 4 = 25).

Getting Away from Textbooks in Student Teaching

Students in both programs had gotten the idea that good teaching consists of departing from the textbook and developing their "own" lessons and units. Some said they felt most "motivated" when they created their own curriculum and that their teaching was most "meaningful" to students when they did their own things. Others were pushed by their university supervisors to do their "own" lessons. The cooperating teachers also praised the student teachers when they did something "creative," reinforcing the students' belief that departing from the textbook was desirable in and of itself. Unfortunately, when student teachers tried to plan outside of textbooks, they often revealed the limits of their own knowledge and experience.

Getting away from the basal: Susan's book making project. In the middle of her student teaching assignment, Susan had her fourth and fifth graders make their own books as a way of motivating them to write stories. Following a procedure she had learned in her children's literature class, Susan spent an entire school day having students cut cardboard, iron the material on to the cover, and sew the pages together. Once the books were made, Susan told the students they could write anything they wanted in their books "as long as it has an idea behind it."

Whereas Susan was competent in the technique of book making, she did not know how to structure the writing phase nor did she seem to appreciate the academic possibilities of the project. Students worked on their stories in class and at home. In her comments to students about their work, Susan only

noted misspelled words; she did not discuss their underlying ideas. When the children were finished writing in their "beautiful" books, Susan felt the project was over. It did not occur to her to read the books, or to have the student authors read one another's books.

"Make up your 'own' plans." Sarah's university supervisors put pressure on her to do "real planning" during student teaching, which meant writing her own lesson plan, not following the book, or imitating the way her cooperating teacher did things. One supervisor told Sarah, "If Mrs. Williams [the cooperating teacher] tells you, 'here's where we are in the book,' I want you to be able to think 'this is subtraction, and this is how *I* teach subtraction'. . ." (p. 86). Sarah puzzled, "They always tell us, you know, don't use the textbook, but why *not*? I mean, it's *there*" (p. 89). She also recognized that doing her "own" plans meant getting inside of the subject matter, something she was not always well-prepared to do. In planning a social studies unit, she reflected, "I want [the children] to understand what 'culture' is, but I am having a hard time understanding it myself. . ." (p. 316b). It was not clear how pushing Sarah out of the textbook was supposed to help her learn to teach subject matter.

Beginning Teaching: Trying to See the "Point of It All"

Whether student teachers used textbooks or departed from the manuals to create their "own" lessons, they often did not understand the content they were teaching and did not seem to get the point of the lesson. In a few instances, however, the teaching suggestions in the guides seemed to provide a scaffold for student teachers' efforts, helping them understand more about the

topic and how it is learned.[9] The guides showed some ways of organizing content for instruction and offered activities and questions which helped these novices know how to proceed. In these instances, the student teachers were able to get a handle on both content and pedagogy by following some of the suggestions and reflecting on what happened.

Sarah: Learning to teach place value. Near the beginning of student teaching, Sarah's university supervisor required her to rewrite a text-based unit she had written on place value. The supervisor urged her to incorporate bundling sticks and chip trading which Sarah had been exposed to in her math methods class.[10] She told Sarah to focus on "content, not tasks." This was hard for Sarah, who understood neither place value nor the tasks used to teach it. She observed, "I don't know math that much" (p. 181).

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[9]Vygotsky's (1978) notion of "instructional scaffolding" has interesting possibilities for thinking about how to help novices learn the tasks of teaching. Instructional scaffolding is a process in which a novice's performance is supported in a way that enables him or her to participate in the entire task. Usually this support is provided through collaboration with another, more expert, person, who initially assumes much of the responsibility for getting the task done. Gradually the beginner takes over an increasing share of the tasks until he/she is able to perform independently.

Rogoff (1982) asserts that a novice "learns the skills involved in an activity through exposure to the tools and procedures others have developed for such situations" (p. 160). In learning to teach, therefore, we are suggesting that if teachers were oriented to learning *from* curricular materials, a teacher's guide might be able to provide a kind of external support which could help the beginning teacher learn to think pedagogically about particular content.

See Griffin & Cole (1984), Vygotsky (1978), and Wood (1980) for further discussion of instructional scaffolding in children's learning. Ball and Noordhoff (1984) discuss the applications of this concept to teacher education.

[10]Bundling sticks and chip trading are activities which are used to explore fundamental concepts of place value and numeration with elementary children.

Sarah incorporated bundling sticks and chip trading into her unit plan as she had been pressed to do, which satisfied her supervisor's concern that she do her "own" planning. In fact, nothing had changed. Substituting an idea learned in a methods class for pages in a math textbook was neither more her "own" nor more focused on content. Indeed, Sarah found it very difficult to teach anything about place value using these activities. The class became loud and hard to manage and she never really got beyond teaching them how to do the chip trading activity.

Sarah also continued to use some pages from the textbook. Though this sounds like she was "modifying the textbook" as she had been told to do, Sarah was mostly trying to use "*something* that's the school's." She did not at first understand the math book's approach to place value. For example, she did not see why it was important for the children to know that the 7 in 374 was seven tens "because they're never going to *say* it like that. If it's 74, they're going to say 'seventy-four'--not 'seven tens and four ones'" (pp. 154-155). She saw no relationship between the exercises in the math book and the chip-trading activity.

Sarah spent a long time--over three weeks--teaching place value (just ones, tens, hundreds) to her fifth graders. For them, it was review, but for Sarah it was the first time through. By the end of the unit on place value, Sarah felt she was beginning to understand the concept better than she had at the beginning. She reflected,

> I had to really think about what place value *is*. Last week, if you'd asked me what place value was, I don't *know*. . .[But] like today, I thought of that example of 1263 and 2136 on the spot to get them to see about *places*. . . . (p. 181)

She found another textbook that she thought gave better explanations of addition and subtraction with regrouping than the one she had been using and

talked at length about specific ways she would teach place value another time, including where she would start and what questions she would ask. She seemed to understand the concept better and to appreciate what was complicated about teaching it. This enabled her to appraise another textbook lesson to see how it could help her. She said, "The next time I teach place value, I'll understand it more and be able to teach it better, faster than this time. . ." (p. 225).

A Sensible Goal for Teacher Education

> Why *shouldn't* we follow the textbook? I mean, it is helping me along and the kids are learning the things they need to be learning. I mean, if it *works*, why should you be worried about making up your own plans for every single thing? (Linda, p. I-6)

The difficulties encountered by our six elementary student teachers as they tried to teach with and without textbooks suggest that the goals as well as the methods of teacher education in this are a need to be reconsidered. The issue of what to teach beginning teachers about curricular materials cannot be reduced to a simple choice between trying to change schools on one hand or preparing beginners to fit the existing system on the other. Teacher educators must cope with the dilemma; sensible goals must combine desirable aims with a realistic perspective on what is appropriate for the preservice phase of learning to teach.[11] We suggest four issues to think about in developing a sensible position for preservice teacher education.

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[11]See Lampert (1985) for a discussion of dilemma management in classroom teaching. Just as she points out that teachers do not *choose* between dichotomous alternatives such as "equity" and "excellence," we are arguing that teacher educators must also balance multiple goals that may be in tension with one another.

1. Justifying Decisions in Teaching

It is not enough to tell prospective teachers who lack knowledge and experience that they should not follow teachers' guides, but should be curriculum developers and decision-makers who create their own plans. Beginning teachers must learn to think about appropriate bases for curricular and instructional decisions. Whether they use textbooks or not, novice teachers need help to see that decisions about what to teach to which students have important consequences (Goodlad, 1984; Scheffler, 1958). Without direct instruction in these matters, such choices may be based merely on individual preferences (Cusick, 1983, Buchmann, 1985), commonsense views of what was meaningful or "fun" (Dewey, 1938/1977; Floden & Buchmann, 1984), or stereotyped notions of what particular students "need" or "can" learn (Anyon, 1981; Brophy, 1983). When our student teachers made curricular decisions, no one helped them pay attention to these considerations. Moreover, they often lacked a conception of what constitutes a worthwhile learning activity.

A surprising finding in our study was that neither program dealt with the policy dimension of curricular decision making. Many of the students were placed in classrooms where district policy mandated the use of a basal series and where curriculum was controlled through objectives and standardized testing. Still, the teacher education programs conveyed the impression that teachers should be autonomous professionals who make their own curricular decisions. The rhetoric of "professional decision making" often conflicts with the fact that many curriculum decisions are made at the district level.

Although the justification "the district mandated it" is not necessarily defensible in some broader sense, prospective teachers need to be prepared to understand, interpret, and work with district curriculum policies. This is a dilemma they will have to face. What do the policies mean? What is their

intent? What should be the relationship between testing and the curriculum? Why do school districts try to control curriculum? Issues such as educational equity and teacher autonomy must be explored. Ignoring external influences on curricular decision making seems a serious and misleading omission in pre-service teacher education.

In order to help prospective teachers learn to justify their decisions carefully, teacher education needs to help them learn how to think deliberatively and responsibly about curricular planning. Ben-Peretz (1984) suggests that student teachers may profit from collaborative participation in curriculum development projects. Such experiences can provide a deeper understanding of curricular decision making, including how choices about content, instructional strategies, scope, and sequence are made, in some absolute sense and under external constraints. This kind of experience is different from the individual unit planning which our students did, for it affords the opportunity to work with and learn from other, more expert curriculum planners.

2. Using Textbooks As Sources of Subject Matter and Pedagogical Knowledge

Developing "one's own" plans requires a flexible understanding of the topic to be taught and ideas about how children can be helped to learn about it. Teacher educators often assume that intending teachers know their subjects better than they do. Since the prospective teachers we followed lacked subject matter knowledge, using textbooks and teachers' guides to guide and strengthen their teaching would have been a more defensible starting point.

3. Implementing Curriculum

Teaching well even from a highly prescriptive curriculum is more complicated than many seem to appreciate.[12] Our students had trouble had trouble visualizing or understanding the numerous teaching suggestions and follow-up activities listed in the teachers' guides and adapting them to meet the needs of particular students. Beginning teachers must be helped to use textbooks and teachers' guides appropriately by learning how to get inside the curriculum as well as how to implement it in a specific setting (Joyce, Showers, Dalton, & Beaton, 1985).

Ben-Peretz (1984) argues that teachers must *understand* curriculum materials in order to be able to use them appropriately. She outlines specific areas of focus for teacher education to help beginning teachers take a reflective and deliberative stance toward curriculum implementation. Based on our study, two of these areas seem especially important. First, she argues that teachers must have an "awareness of theoretical 'choice points'" in the materials--the deliberate choices made by curriculum developers. Using materials thoughtfully requires an understanding of the meaning and possible consequences of the way they are designed and what they include. In our study, Linda, for example, might have been helped to understand the kindergarten teacher's guide if she had been able to think about why the developers chose to have the children measure each other with plastic links as a means of learning about the topic of "length." What philosophical, psychological,

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[12]People often underestimate the task of implementing curriculum. For example, Harste (1985) claims that "you don't need to study reading in college to be able to teach a basal reading lesson" because such materials are "teacher-proof."

sociological, or methodological issue underlay the developers' decision (Ben-Peretz, 1984, p. 19)? Instead, Linda simply focused on trying to follow directions she did not understand.

Ben-Peretz (1984) proposes that beginning teachers should learn to analyze curriculum using both internal and external frames of reference, and she points out that multiple frames of reference can help teachers uncover the educational potential as well as the limitations of a set of curriculum materials. Our students learned to critique textbooks using only external frames of reference--the lens of conceptual-change learning in one program, and lesson plan formats in the other program--and they tended to recognize only deficiencies in the textbooks they examined. Besides helping prospective teachers learn how to get at the orientation and rationale underlying curriculum, teacher education should give intending teachers guided practice for implementation. They need opportunities to plan and teach from teachers' guides and to supplement them appropriately (Joyce et al., 1985)[13]

4. Learning to Learn from Curriculum Materials

Finally, and perhaps most important, preparing prospective teachers to use curriculum materials well should not be the ultimate goal. Preservice teacher education must prepare teachers to go on learning from their teaching experience. Teachers' guides may provide a helpful scaffold for learning to think pedagogically about particular content, considering the relationship between what the teacher and students are doing and what students are supposed to be learning. This kind of thinking about ends and means is not the same as

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[13]See Joyce & Showers (1980) for a discussion of the kinds of "training" required in order for teachers to act on what they learn.

following a teacher's guide like a script. Beginning teachers must be oriented toward learning from teachers' guides and other curriculum materials, so that they can move toward being able to build their own units of study that are responsible to subject matter goals and responsive to their students. This is a reasonable goal for teacher development, not a starting point for beginners.

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Appendix

Summary and Content of Courses

We developed a set of questions to help us explore what each program communicated explicitly about textbooks, curricular decision making and the teacher's role. Based on our course and student teaching observations, we began with questions logically connected to issues of curriculum and to beginning teachers. Our concurrent review of empirical and conceptual-analytic work about curricular materials and curricular decision making suggested other topics. These questions, grouped under four headings, served as a framework for scrutinizing what a set of courses in each program taught:

a. The nature of textbooks and other curricular materials--How were textbooks portrayed? What were they said to be good for or not good for? Were students encouraged to evaluate curricular materials and on what bases (e.g., implicit conception of learning, content coverage, quality of explanations, appropriateness to level, ethnic bias, etc.)?

b. Curricular decision making: the teacher's role, other influences on curriculum--What should be taught and how should it be taught? Who should decide? Are teachers supposed to decide what to teach? How to teach it? If so, how should they decide? Are they supposed to "adapt" what is in the text or curriculum guide, and, if so, what does "adapt" mean? What else influences the curriculum and how should teachers respond to external pressures or policies (e.g., district curriculum guidelines, testing, state competency objectives, federal legislation, colleagues, principals, parents)?

c. Planning--How was planning presented? What is the role of the textbook, teacher's guide, other curriculum materials in teacher planning?

d. Practical experiences--What kinds of experiences did students have with curricular materials and curricular decision making? How were these structured (e.g., textbook critiques)? What kinds of experiences did the teacher candidates have in planning, either in courses or field experiences? Did the prospective teachers have chances to develop curriculum? Did the students have opportunities to "adapt" materials? How were these practical experiences supervised or evaluated?

Academic Program

Educational Psychology. This was the first course in the program. It began with cognitive psychology (e.g., short- and long-term memory, cognitive networks, schemata) and emphasized a constructivist view of learning. The second part of the course focused on epistemology; it dealt with the nature and kinds of knowledge and ways to think about what children should learn. The course concluded by drawing parallels between children's learning and the growth of knowledge in the disciplines. We examined this course for its messages about teaching, the teacher's role, and subject matter.

Curriculum. This was the next course in the program. It was divided into four segments: teachers as curriculum decision makers, constructing a spiral curriculum, alternative perspectives on curriculum, and controversies over the curriculum. Students analyzed textbooks, planned lessons, and worked on building a spiral curriculum. We looked closely at the course messages about curricular materials and curricular decision making and the practical experiences that students had with textbooks.

Science Methods. This was the first course in the second year of the Academic Program and occurred the term before student teaching. The intructor emphasized the value of teaching for conceptual change and criticized the alternatives--"didactic" teaching and "activity-driven" teaching. This course included microteaching: students teaching short science lessons to groups of elementary children. The teacher candidates also analyzed science curricular materials and were taught about planning for science instruction. This course conveyed strong messages about science teaching and the appropriate role of textbooks and teachers' guides in planning and teaching.

Decision-Making Program

Educational Psychology. As in the Academic Program, this was the first course that students took. The content of the course was designed to encourage students to make systematic decisions about instruction. The emphasis was on application of knowledge derived from educational psychology (e.g., Piagetian stages, theory of motivation, concept, principle, and skill learning). Students were taught to write behavioral objectives. They were given a format to use for daily and unit planning and they practiced writing lesson plans. This course set the stage for the overall program emphasis on planning and decision making.

Reading Methods/Field #1. This was the next course in the program. It was taught in a local elementary school where the teacher candidates were also observing and teaching in classrooms. The course emphasized what the instructor called the "big theory of reading"--essentially that reading instruction should emphasize reading for meaning. Students learned about teaching sight words, use of context, and the language experience approach. This course gave distinct messages about the nature of basal textbooks. "Professional" teachers do not follow basals. In light of this, we were especially interested in the fact that the prospective teachers were in classrooms where teachers relied on basal programs for reading instruction.

Reading Methods/Field #2. This was another field-based course in the second year of the program. Course objectives were for students to gain specific knowledge about grouping practices, materials selection, language development, word recognition, recreational and "content-area" reading, and comprehension. The general goal was to be able to make "effective and appropriate instructional decisions." Students taught a reading group and one "special needs" student all term in conjunction with this course, and 65% of their course grade depended on their application of course concepts and strategies in their teaching. In this course, the instructor dealt directly with the issue of basal textbooks, stating that these materials, although often mandatory, are insufficient. The course offered students several approaches and activities to be used in conjunction with basals.